A guide to direct measures of patient satisfaction in clinical practice

Health Services Research Group

When asked, most patients report that they are satisfied with their health care. Does this tell us anything about the technical quality of care, or do satisfaction ratings reflect, instead, the interpersonal skills of clinical staff? For that matter, is it worth measuring patient satisfaction at all? We discuss some major concepts and issues relating to research in patient satisfaction and provide a practical guide for using information on patient satisfaction in clinical settings.

Measures of patient satisfaction

Approaches to measuring patient satisfaction can be indirect or direct. In the indirect method, periodic field surveys sample the general population and patients from alternative health care delivery systems. This approach assesses the consumer's perspective on health care providers in general[1-5] and does so by stipulating a specific period as a frame of reference (e.g., the last 12 months). The results provide a perspective that may be interpreted in relation to time alone or to population-based measures such as health status.

The direct approach is to ask patients to evaluate their satisfaction with encounters in particular health care facilities or with specific providers.[6-9] This method can be used in continual quality-improvement programs or program evaluation and is the focus of this article.

Each approach makes use of written questionnaires that ask respondents to rate health care services and providers in several dimensions. There may be questions concerning facilities, providers, treatment or outcome. The focus is on the perceptions of the patient rather than the facts associated with the clinical encounter. "How long did you spend with your physician today?" is an example of a question that might be incorporated in a quality assurance program. The pertinent question in a patient satisfaction survey seeks instead the patient's subjective impression: "Did your doctor spend enough time with you today?"

Measurement problems in patient satisfaction studies

There has been considerable debate about the interpretation of patient satisfaction surveys.[4,10-12] Unfortunately, it is difficult to interpret and compare results across studies because of methodologic and measurement variations. Most of the studies have used correlational rather than experimental and controlled observational designs. The analysis was often not very sophisticated: of the 221 studies reviewed by Hall and Dornan[11] only 14% manipulated variables.

A further problem is that most studies have used nonstandardized measures: validity and reliability studies have not been conducted, or if they have the results are not acceptable. Nearly 75% of the studies reviewed by Hall and Dornan[11] used nonstandardized measures, most investigators designing their

Members: Drs. Lorraine E. Ferris (principal author), Department of Behavioural Science; J. Ivan Williams, Department of Preventive Medicine and Biostatistics; Hilary A. Llewellyn-Thomas, Faculty of Nursing; Antoni S.H. Basinski, Department of Family and Community Medicine; Marsha M. Cohen, Department of Health Administration; and C. David Naylor, Department of Medicine, University of Toronto, Toronto, Ont.

The Health Services Research Group is part of the Clinical Epidemiology Unit, Sunnybrook Health Science Centre, Toronto, Ont.

Reprint requests to: Health Services Research Group, Clinical Epidemiology Unit, Rm. A443, Sunnybrook Health Science Centre, 2075 Bayview Ave., North York, ON M4N 3M5

← For prescribing information see page 1834

own questionnaire to measure patient satisfaction. Without standardized measures interstudy comparisons are difficult.

More important, the distributions of scores on patient satisfaction surveys are highly skewed. Only rarely do studies show satisfaction rates below 90%.[13] Published or standardized measures are developed and tested so that they will discriminate between ratings in this upper range. These measures often have established norms that allow for more precise interpretation of the scores. The continued use of standardized measures in a broader spectrum of patient and provider populations will increase our knowledge about the range of patient satisfaction ratings and assist in establishing further norms for subgroup analysis.

Do satisfaction ratings predict patient behaviour?

Interest in assessing patient satisfaction with health care arose with the consumer movement of the 1960s. Over the next 25 years health services researchers determined that satisfied and dissatisfied patients behave differently; this finding has established the usefulness of learning how consumers feel about the services they receive. Not surprisingly, satisfied patients are more likely to remain with a physician,[1,2] keep appointments,[14] comply with treatment,[15-17] refer other patients to their physician[4] and use services.[5] Such behavioural consequences of patient satisfaction should result in better medical care and improved outcomes, but only if satisfaction correlates primarily with health care of high technical quality — an issue examined later. Otherwise, the patient may remain with a congenial physician who provides inappropriate care.

Can patients provide valid measures of the quality of care?

Patient satisfaction surveys typically ask consumers to evaluate the technical quality of the care they receive (e.g., diagnosis and management), the interpersonal aspects of care (e.g., courtesy and respect) and the accessibility and availability of services or professionals. Criticisms of these evaluations are, for the most part, aimed at the validity of patients' assessments of the technical features of a medical encounter. We tend to accept the legitimacy of patients' judgements about interpersonal variables and issues of accessibility and availability; these judgements provide unique subjective information not otherwise available. Moreover, consumer ratings of interpersonal aspects of care appear to be reliable and, to the extent that such ratings can be appraised, valid.[18]

On the other hand, the assessment of technical aspects has traditionally been the domain of professionals. Some health services researchers argue that consumer ratings of technical care should not be expected to correspond with physician ratings, because of the different perspectives on the process of care.[1,19] Since guidelines and standards are usually developed by a physician group and may not reflect public attitudes, the two groups could differ in their assessment of technical quality. However, for common medical encounters it has been shown that consumers and physicians tend to agree.[10]

Consumer ratings of the interpersonal aspects of care appear moderately correlated with those of the technical quality (r = 0.60 to 0.70).[2] Thus, a physician's interpersonal manner when addressing common medical concerns (e.g., sore throat) may influence a patient's assessment of the technical aspects of care.[2] If good interpersonal and technical skills are truly to be found in the same practitioner there is no reason for concern.[10] If not, patients may overrate the technical quality of care because they like their physician's manner. Without further research we do not know whether this correlation constitutes a bias in consumer ratings. For now, the ratings are best interpreted with data from quality assurance programs, in which practice patterns are measured against technical standards of care.

Patient characteristics and reported satisfaction rates

In correlational studies, patient age, education, occupation and ethnic group are inconsistently associated with ratings of satisfaction with the technical and interpersonal aspects of health care. When a relation is found it is reported to be weak.[10,18] These inconsistent relations may be due to measurement problems (e.g., in nonstandardized surveys) or other methodologic pitfalls (e.g., varying populations and sampling bias). Research that uses standardized measures and sound sampling techniques is needed before we can determine the influence of consumer characteristics on satisfaction ratings.

Practice characteristics and patient satisfaction

The length of the health care visit has been inconsistently related to patient satisfaction with the physician and health care setting.[20-23] Continuity of care (i.e., the patient has a regular source of care and sees the same provider) appears better correlated with patient satisfaction,[24,25] although some studies have not found this association.[23,26] Patient satisfaction is also influenced by the kind and number of diagnostic tests and procedures. Davies and Ware[10]

concluded that the influence is not large enough to invalidate consumers' ratings, but we suggest that this factor be considered in interpreting patient satisfaction data. Last, studies have found that clear communication in the form of adequate and comprehensive explanations is directly related to increased patient satisfaction.[20,27-29]

Guidelines for the use of patient satisfaction ratings in clinical practice

More sophisticated research designs and greater use of standardized measures are required to clarify whether patients provide valid assessments of quality of care. However, there is sufficient evidence to indicate that under particular conditions patient satisfaction ratings are useful and valid. What are these conditions? How can we maximize the benefits of using such ratings to understand the quality of care provided? We offer several suggestions.

Standardized measures

A common measurement problem in patient satisfaction ratings is the uniformly favourable responses. Standardized measures with known performance characteristics help discern differences in these positively skewed data. It is probably preferable to use written surveys, since questionnaires administered orally yield higher satisfaction scores;[30] however, sound orally administered measures are available (e.g., the Evaluation Ranking Scale[12]).

There are many standardized patient satisfaction measures available for use in medical settings. The Visit-Specific Satisfaction Questionnaire[8] examines patients' satisfaction with the overall visit, technical and interpersonal aspects of care and length of office waiting time. The Client Satisfaction Questionnaire,[31] which is applicable for mental health and general health care settings, examines dimensions of care such as physical surroundings, general satisfaction and interpersonal and technical aspects of care. The Evaluation Ranking Scale[12] is used in the same settings. It has an oral format and assesses accessibility, availability, physical environment, informational resources, interpersonal and technical aspects of care, service relevance and the outcome or effectiveness of services. The Patient Satisfaction Questionnaire[32] is considered an indirect measure of patient satisfaction (patients are not asked about specific health care settings or providers).

Cover letter

Patients who are participating in a survey should be given a letter that states why their opinion is of interest, how they were chosen, how the information will be used, the procedure to be followed and an assurance of anonymity. The term "anonymity" must be carefully explained so that it is not confused with "confidential." Respondents should understand that there are no right and wrong answers (they are only being asked to give an opinion), the health care provider will not know their individual ratings and the purpose is not to evaluate the providers but to improve services. If the questionnaire is to be returned in the mail a stamped envelope and date for return should be included. If it is to be completed in the office a marked box prepared for the returns could be provided and the location of the box supplied in the letter.

Demographic data

In light of the uncertain relation between patient characteristics and patient satisfaction ratings it is advisable to ask patients for some demographic information. This should include age, sex, education and other variables that may be relevant to the practice. These data can be related — with caution, because of the post hoc nature of the analysis — to the satisfaction ratings in order to detect relevant patterns of responses.

Common versus complex medical encounters

Patient satisfaction surveys appear useful for common medical encounters (e.g., sore throat), but there is insufficient research on ratings of the technical aspects of care when complex services are received. Until more is known about complex cases we recommend that the patient satisfaction survey be accompanied by a brief measure of health status. The measure should not elicit details that might jeopardize the assurance of patient anonymity. However, it should help identify patients with complex conditions so that their responses can be compared with those of patients whose conditions are more common.

Patient attrition

Patients' demographic characteristics do not predict who will discontinue a service or leave a practice.[33,34] However, not unexpectedly, patients who stay have a higher rate of satisfaction than do those who drop out.[13,35-37] We offer several suggestions to counteract this positive selection bias in satisfaction ratings.

First, in settings of continuing care (e.g., family medicine and general pediatrics) a cross-section of patients could be drawn so that information is received from patients who have various levels of

exposure to the physician or institution. It may also be worth while to have interviews with those leaving the practice. If the setting is one of episodic care (e.g., specialty consultations for specific management problems or procedures), then instead of patients being sampled cross-sectionally they should be sampled when care is complete. Unfortunately, some recall bias may be introduced with longer episodes of care.

Patients who are leaving the practice can be asked to complete a patient satisfaction questionnaire if, for example, they ask for their chart to be forwarded to another physician or institution. The questionnaire would ideally be *given* to the patient, since mailed surveys have low rates of response (30% to 35%) and are positively biased, in that those most satisfied are also most likely to return the questionnaire.[37]

Ratings and other indicators of care

Patient satisfaction information can be an integral part of program evaluation or ongoing quality management, addressing various facets of the structures, processes and outcomes of clinical care.[38] Using standardized measures, health care facilities and providers should be able to establish their patients' levels of satisfaction, monitor fluctuations from desirable levels and link those fluctuations to other indicators of the quality of care. Patient satisfaction information should be employed in a comprehensive feedback system that not only obtains initial ratings but also resamples systematically to ensure that areas of concern have been improved.

Conclusion

The consumer perspective provides unique information that is essential to a complete and balanced evaluation of the quality of care.[35] Direct measures of satisfaction address issues specific to a particular practice, service or practitioner and are therefore an important component of quality assurance programs. Satisfaction surveys also enable patients to express their legitimate concerns and unmet needs — a process that, in itself, may be positive.

The best use of patient satisfaction ratings is to examine trends and fluctuations that will assist in health service planning, evaluation and improvement. Self-congratulation on the high scores achieved on patient satisfaction that is measured only once is a common pitfall. A systematic approach involves careful measurement, interpretation of results in conjunction with other data and ongoing monitoring either to ensure the maintenance of high performance or to make appropriate changes in areas of concern.

We thank Dr. Paul Favaro for his helpful comments on an earlier version of this article.

References

1. Davies AR, Ware JE, Brook RH et al: Consumer acceptance of prepaid and fee-for-service care: results from a randomized controlled trial. *Health Serv Res* 1986; 21: 429-452
2. Hulka BS, Zyzanski SJ, Cassel JL et al: Scale for the measurement of attitudes towards physicians and primary medical care. *Med Care* 1970; 8: 429-436
3. Pope CR: Consumer satisfaction in a health maintenance organization. *J Health Soc Behav* 1978; 19: 291-303
4. Ware JE, Snyder MR, Wright R et al: Defining and measuring patient satisfaction with medical care. *Eval Prog Planning* 1983; 6: 247-263
5. Zyzanski SJ, Hulka BS, Cassel JC: Scale for the measurement of satisfaction with medical care: modifications in content, format and scoring. *Med Care* 1974; 13: 611-620
6. DiMatteo MR, Hays R: The significance of patients' perceptions of physician conduct: a study of patient satisfaction in a family practice center. *J Commun Health* 1980; 6: 18-34
7. Linder-Pelz S, Struening EL: The multidimensionality of patient satisfaction with a clinic visit. *J Commun Health* 1985; 10: 42-54
8. Ware JE, Hays RD: Methods for measuring patient satisfaction with specific medical encounters. *Med Care* 1988; 26: 393-402
9. Wolf MH, Putnam SM, James SA et al: The medical interview satisfaction scale: development of a scale to measure patient perceptions of physician behaviour. *J Behav Med* 1978; 1: 391-401
10. Davies AR, Ware JE: Involving consumers in quality of care assessment. *Health Aff* 1988; spring: 33-48
11. Hall JA, Dornan MC: Meta-analysis of satisfaction with medical care: description of research domain and analysis of overall satisfaction levels. *Soc Sci Med* 1988; 27: 637-644
12. Pascoe GC, Attkisson CC: The Evaluation Ranking Scale: a new methodology for assessing satisfaction. *Eval Program Plann* 1983; 6: 335-347
13. Lebow JL: Similarities and differences between mental health and health care evaluation studies assessing consumer satisfaction. *Eval Program Plann* 1983; 6: 237-245.
14. Hertz P, Stamps PL: A re-evaluating appointment-keeping behaviour. *Am J Public Health* 1977; 67: 1033-1036
15. Linn MW, Linn BS, Stein SR: Satisfaction with ambulatory care and compliance in older patients. *Med Care* 1982; 20: 606-614
16. Vuori H, Aku T, Aine E et al: Doctor-patient relationships in light of patients' experiences. *Soc Sci Med* 1972; 6: 723-736
17. Wilson P, McNamara JR: How perceptions of a simulated physician-patient interaction influence intended satisfaction and compliance. *Soc Sci Med* 1982; 16: 1699-1704
18. Ware HE, Davies-Avery A, Stewart AL: The measurement and meaning of patient satisfaction. *Health Med Care Serv Rev* 1978; 1: 1-15
19. Lebow JL: Consumer assessments of the quality of medical care. *Med Care* 1974; 12: 328-337
20. Aday LA, Andersen RA, Fleming GV: *Health Care in the US: Equitable for whom?*, Sage, Beverly Hills, 1980
21. Ross CE, Wheaton B, Duff RS: Client satisfaction and the organization of medical practice: why time counts. *J Health Soc Behav* 1981; 22: 243-255
22. Idem: The impact of clinical encounter events on patient and physician satisfaction. *Soc Sci Med* 1981; 15: 239-244
23. Weinberger M, Greene JY, Mamlin JJ: Patient perceptions of health care at a university-based ambulatory care clinic. *J Ambul Care Manage* 1981; 4: 55-64
24. Fleming GV: Hospital structure and consumer satisfaction.

Health Serv Res 1981; 16: 43-63
25. Gray LC: Consumer satisfaction with physician provided services: a panel study. *Soc Sci Med* 1980; 14A: 65-73
26. Mechanic D, Greenley JR, Cleary PD et al: A model of rural health care: consumer response among users of the Marshfield Clinic. *Med Care* 1980; 18: 597-608
27. Blanchard CG, Treadwell TW, Blanchard EB: The impact on patient satisfaction of the introduction of family medicine residents into a model practice facility. *J Fam Pract* 1977; 4: 133-136
28. Kincey J, Bradshaw P, Ley P: Patients' satisfaction and reported acceptance of advice in general. *J R Coll Gen Pract* 1975; 25: 558-566
29. Wolley FR, Kane RL, Hughes CC et al: The effects of doctor-patient communication on satisfaction and outcome of care. *Soc Sci Med* 1978; 12: 123-128
30. LeVois M, Nguyen T, Attkisson C: Artifact in client satisfaction assessment: experience in community mental health settings. *Eval Program Plann* 1981; 4: 139-150
31. Larsen D, Attkisson C, Hargreaves W et al: Assessment of client/patient satisfaction: development of a general scale. *Eval Program Plann* 1979; 2: 197-207
32. Ware J, Snyder MK: Dimensions of patient attitudes regarding doctors and medical care services. *Med Care* 1975; 13: 609-615
33. Pekarik G: Follow-up adjustment of outpatient dropouts. *Am J Orthopsychiatry* 1983; 53: 501-511
34. Zisook S, Hammond R, Jaffe K et al: Outpatients requests, initial session and attrition. *Int J Psychiatry Med* 1979; 9: 339-350
35. Hall JA, Feldstein M, Fretwell MD et al: Older patients' health status and satisfaction with medical care in an HMO population. *Med Care* 1990; 28: 261-270
36. Linn LS: Factors associated with patient evaluation of health care. *Milbank Q* 1975; 53: 531-548
37. Nguyen TD, Attkisson CC, Stegner BL: Assessment of patient satisfaction: development and refinement of a service evaluation questionnaire. *Eval Program Plann* 1983; 6: 299-314
38. Nelson EC, Hays RD, Larson C et al: The patient judgement system: reliability and validity. *QRB* 1989; June: 185-191

Conferences

continued from page 1725

Nov. 4-7, 1992: American Medical Writers Association 52nd Annual Conference
Adam's Mark Hotel, Houston
American Medical Writers Association, 9650 Rockville Pike, Bethesda, MD 20814; (301) 493-0003

Nov. 6, 1992: Social Work Clinic Day
Joseph E. and Minnie Wagman Centre, North York, Ont.
Sybil Gilinsky, Continuing Education, Baycrest Centre for Geriatric Care, 3560 Bathurst St., North York, ON M6A 2E1; (416) 789-5131, ext. 2365, fax (416) 785-2378

Nov. 16-18, 1992: Excellence in Medical and Scientific Writing
Toronto
McLuhan and Davies Communications, Inc., 167 Carlton St., Toronto, ON M5A 2K3; (416) 967-7481, fax (416) 967-0646

Nov. 20, 1992: Practitioners' Day
Mount Sinai Hospital, Toronto
Sybil Gilinsky, Continuing Education, Baycrest Centre for Geriatric Care, 3560 Bathurst St., North York, ON M6A 2E1; (416) 789-5131, ext. 2365, fax (416) 785-2378

Nov. 23-25, 1992: OSH '92 — National Occupational Health and Safety Conference and Trade Show (sponsored by the Occupational Health, Safety and Environment Group, Southam Business Communications Inc.)
Toronto
Susan Mogg, OSH '92 Conference and Trade Show, 1450 Don Mills Rd., Don Mills, ON M3B 2X7; (416) 445-6641, fax (416) 442-2200

Les 4 et 5 déc. 1992 : 18e Réunion scientifique — Epidémiologie et santé mentale
Palais des congrès de Beaune, France
Dr Rebecca Fuhrer, Institut National de la santé et de la recherche médicale, U.169: Recherches en epidémiologie, 16, ave. Paul-Vaillant-Couturier, 94807 Villejuif Cedex, France; téléphone 011-33-1-45-59-5060

Dec. 9-13, 1992: Fall Symposium on Back Pain
Hyatt Regency Embarcadero, San Francisco
Dr. Aubrey A. Swartz, executive director, American Back Society, St. Joseph's Professional Center, 401-2647 E 14th St., Oakland, CA 94601; (510) 536-9929

Mar. 18-23, 1993: Association for Applied Psychophysiology and Biofeedback 24th Annual Meeting
Biltmore Hotel, Los Angeles
Joette Cross, director of meetings, Association for Applied Psychophysiology and Biofeedback, Ste. 304, 10200 W 44th Ave., Wheat Ridge, CO 80033; (303) 422-8436, fax (303) 422-8894

Apr. 5-9, 1993: 4th International Meeting on Trace Elements in Medicine and Biology — Trace Elements and Free Radicals in Oxidative Diseases (organized by the Society for Free Radical Research and the Société francophone d'étude et de recherche sur les éléments trace essentiels)
Chamonix, France
Official language: English. Simultaneous translation languages: French-English
Prof. Alain Favier or Mme. Arlette Alcaraz, Laboratoire de Biochimie C, Hôpital A. Michallon, BP 217X, 38043 Grenoble Cédex 09, France; telephone 011-33-76-76-54-07, fax 011-33-76-42-66-44

continued on page 1740